

CLAIMS:

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1. A handpiece for a rotary tool including a flexible power transmission shaft configured for connection at one end to the rotary tool, and at the other end to said handpiece, at least one locking formation affixed to the shaft, 5 said handpiece comprising:

a housing having a first end for receiving the power transmission shaft, and a second end configured for accommodating a working attachment, said housing defining a central throughbore for rotatably receiving the flexible shaft;

10 at least one locking actuator disposed in said housing for releasable engagement with the at least one locking formation; and

15 said handpiece being provided with a biasing force for biasing said at least one actuator out of engagement with the at least one locking formation, said at least one locking actuator being configured so that a user-applied force on said at least one actuator overcomes said biasing force to enable locking engagement between said at least one actuator and the at least one locking formation.

2. The handpiece of claim 1 wherein said at least one actuator is radially biased relative to said at least one locking formation.

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3. The handpiece of claim 1 wherein said biasing force is provided by a spring disposed between said at least one actuator and said at least one locking formation.
  4. The handpiece of claim 1 wherein said housing defines a chamber, and said biasing force is provided by a spring disposed in said chamber <sup>110</sup> for exerting a radial biasing force against said at least one actuator.
  5. The handpiece of claim 1 wherein said at least one actuator is engaged on said housing approximately midway between said first and second ends.
  6. The handpiece of claim 1 wherein said at least one actuator is configured to extend radially from said housing and is at least partially surrounded by at least one gripping formation.
  7. The handpiece of claim 6 wherein said at least one gripping formation is at least one rib fence.
  8. The handpiece of claim 1 further including an attachment formation at said second end for receiving an endcap.

9. The handpiece of claim 8 further including an endcap configured for engagement upon said attachment formation, said endcap having a flared outer end.

10. The handpiece of claim 8 wherein said attachment formation is configured so that upon removal of said endcap, said attachment formation can receive a supplemental attachment.

11. The handpiece of claim 8 further including an end cap configured for attachment to said attachment formation so that said an end portion of said shaft extends past an outer end of said end cap.

12. The handpiece of claim 11 wherein said outer end of said end cap is flared.

13. A handpiece for a rotary tool including a flexible power transmission shaft configured for connection at one end to the rotary tool, and at the other end to said handpiece, comprising:

a housing having a first end for receiving the power transmission shaft, and a second end configured for accommodating a working attachment, said housing defining a central throughbore for rotatably receiving at least a portion of the flexible shaft;

an attachment formation at said second end configured for receiving  
an endcap; and

an endcap configured for engagement upon said attachment  
formation.

14. The handpiece of claim 13 wherein said endcap has a flared  
outer end.

15. The handpiece of claim 13 wherein the flexible shaft has a  
collet nut affixed to a free end, and said attachment formation is configured to  
circumscribe at least a portion of said collet nut.

16. The handpiece of claim 15 wherein said endcap is configured  
for attachment to said attachment formation so that said an end portion of said  
collet nut extends past an outer end of said end cap.

17. The handpiece of claim 13 further including at least one  
locking formation affixed to the shaft within said throughbore, at least one locking  
actuator disposed in said housing for releasable engagement with said at least one  
locking formation, and said at least one actuator being provided with a biasing  
force for biasing said at least one actuator out of engagement with said locking  
formation, said at least one locking actuator being configured so that a user-

applied force on said at least one actuator overcomes said biasing force to enable locking engagement between said at least one actuator and said at least one locking formation.

18. The handpiece of claim 17 wherein said locking actuator is radially reciprocable in said housing.